



REMARKS

I. Status of the Claims

Claims 1, 2, 4, 9, 10, 12 and 59-66 are pending. No claims have been amended.

II. Rejections Over Prior Art

All of the claims have been rejected over WO 97/16075 (Ream) in view of the following references:

WO 91/01884 (Redford);
U.S. Patent No. 5,423,252 (Yamamoto);
U.S. Patent No. 4,578,273 (Krubert);
U.S. Patent No. 5,553,536 (Van Os);
U.S. Patent No. 5,165,340 (Karlyn '340);
U.S. Patent No. 5,429,045 (Karlyn '045); and
U.S. Patent No. 5,730,048 (Averill).

Van Os, Karlyn '340, Karlyn '045, and Averill are newly cited references.

III. The Scope and Content of the Prior Art

Ream is the sole reference which discloses printing two component images on an edible substrate. The edible substrates in Ream are large, flat sheets 22 of chewing gum (i.e. most preferably 10 inches wide and 4-1/2 inches long, length being measured in the traveling direction of the sheet, see e.g. page 10, lines 15-16). Thus, printing registered images on the sheets is not problematic.

The sheets are positioned in recesses 14, which are larger than the sheets, and about the same thickness as the sheets (see page 14, line 24), preferably a little deeper (i.e. preferably 1/16 inch, compared to the 0.06 inch "ideal" thickness of the sheet, see page 19, line 31; page 10, line 10). These recesses do not securely hold pieces in registration. The edible sheets disclosed in Ream are large and flat, and holding them in a registering

relationship between two printing stations is not disclosed in the reference in a manner that renders the claimed invention obvious. In summary, except that two images are printed on an edible, the method described in Ream has nothing whatever to do with the claimed method of printing multicolor images on the curved surfaces of small confectionery pieces.

None of the other references provides a teaching such that in combination with Ream all of the claim elements are found or suggested. Redford discloses a laser etch system which is specifically designed to avoid the problems alleged to be associated with offset printing (see page 3, line 11 to page 4, line 13). An offset roller prints an image or background at a first offset printing station (page 4, line 37 to page 5, line 2). Then, a portion of the image is removed at a laser etch station. The laser etch station is a non-contact step. Thus, this reference does not disclose a second printing step, a second color, registration of two printed images, etc. Contrary to the Examiner's assertion, this reference does not disclose non-planar surfaces of a substrate protruding above individual cavities, as claimed in claim 65.

Likewise, Yamamoto discloses individual pieces (such as pharmaceutical tablets) conveyed on an endless belt system, and held in their respective recesses using vacuum. The reference does not disclose holding edible pieces in registration so that multiple component images may be formed on curved surfaces.

Krubert discusses large cookie substrates to which multiple applications of food coloring are added. The reference does not disclose recesses or other devices required to hold the pieces in registration between printing stations, and overall, the apparatuses and methods disclosed in that patent do not appear particularly relevant to the present claims.

The references Van Os, Karlyn '340, Karlyn '045 and Averill were applied for the first time in the January 20, 2004 Office Action. These are all alleged to teach "using vacuum throughout a printing process so that the articles are maintained in registration with two or more printing stations." (Office Action, page 3). However, none of them discloses the use of a conveyor system or method that is remotely relevant to the pending claims. These references are non-analogous, because they are not reasonably pertinent to the particular problem with which the inventor is concerned, i.e. the printing of composite images on the curved surfaces of small confectionery pieces. See M.P.E.P. § 2145.

For example, Van Os discloses a system particularly adapted for printing on credit card sized plastic cards (col. 3, lines 29-31). The system uses vacuum means 16, to hold substrates 12 on a belt (col. 4, line 50). These means appear to correspond to a conventional vacuum conveyor belt (i.e. vacuum apertures 70 cooperating with vacuum grooves 72 formed in the belt surface, see col. 6, lines 34-42). Thus, the reference discloses conventional means for conveying flat objects. Van Os does not disclose pressure differential means provided to individual recesses to convey shaped edible articles. Therefore, the objective allegedly met by the references is not "exactly applicant's objective," as the Examiner alleges. (Office Action, page 3).

Likewise Karlyn '045, Karlyn '340 and Averill '048 are all directed to systems for printing on compact disks which are of course relatively large, flat, inorganic objects, and the particular problems addressed in these references are not pertinent to the problem addressed by the claimed invention.

IV. Differences Between the Claimed Invention and the Prior Art

The January 20, 2004 Office Action does not set forth the claim elements alleged to be missing from Ream, or a motivation for combining Ream with one or more secondary references so that all of the claim limitations are found in the combination of references. See M.P.E.P. § 2143.03. Thus, the rejection remains something of a moving target. Nevertheless, the following claim elements are considered to be important for embodiments in which small confectionery pieces are produced having multicolor composite images on them, and none of them has yet been adequately addressed on the record.

Claim 59 recites a plurality of recesses on a transport surface, and that the recesses are shaped in correspondence with the edible pieces. It is clear from the specification and remarks already made on the record, that the shape of the recess helps to hold the pieces in registration between printing stations. Ream does not disclose this feature. Recesses, as presently claimed are not really present at all in Ream. In any event, they are clearly not on a “transport surface,” as presently claimed.

The reference that primarily addresses “seating” of an edible piece in a shaped recess for printing is Redford, but the method described in that reference was specifically adopted to avoid offset printing, as noted above. As a result, the combination of this reference with Ream, which is clearly not physically possible, also has no intuitive or logical rationale. In summary, there is no suggestion in Redford that proper seating of a tablet or other edible in a shaped recess can be utilized to print an edible with composite images using two printing steps. To the contrary, Redford teaches a method to avoid the use of contact printing to print a detailed image, by using a laser etch.

A feature set forth in claim 65 is that the non planar printing surface protrudes above the transport surface. As noted in the paragraph bridging pages 26 and 27, this “proud” arrangement permits greater surface area to be covered by the image. This feature is relevant where the preferred substrates are confectionery pieces, and the image may have decorative appeal, as well as serving a purely informational purpose. None of the references teaches this feature, including Redford, which was cited by the Examiner in this connection.

Still another feature set forth in the claims which distinguishes the prior art, and which has not been given proper consideration, is the size of the edible pieces printed on and the corresponding high resolution of the composite image. Claim 63 recites lentil shaped pieces, 14.4 mm or smaller in their smallest dimension, and having a registration better than 1/64 inch. The Office Action disregards these limitations altogether: “the shape of the pieces, their size and any shell, are all seen to have been an obvious function of the particular product one chooses to be printed.” (Office Action, page 3). The fact of the matter is that the size and materials of the substrate have everything to do with what can be printed on them using conventional techniques, and none of the prior art discloses or suggests a system that prints two registered images on a curved surface of a small piece of confectionery. The fact that multicolor images can be formed on compact disks, for example, does not make obvious the claimed method of printing on curved surfaces of individual confectionery pieces.

Claim 64 recites that the surface is a sugar shell and that the component images are contact printed, allowing time for the first image to dry before printing the second image. The Examiner alleges, relying on Van Os, that it is “conventional to dry

printing before a second printing is applied.” (Office Action, page 4). However, Van Os does not disclose printing on individually transported confectionery items. In fact, Van Os uses a curing station to dry the articles, which would likely damage an M&M’s® chocolate candy or other confectionery substrate. In any event, the drying time feature has not been disclosed in the prior art in a context that renders claim 64 obvious.

It may well be, as the Office Action states, that “applicant is certainly not the inventor of lentil shaped, sugar shell, “M&M’s.” Nevertheless, M&M’s® chocolate candies having composite images printed thereon were not in the prior art when this application was filed, and there is no art of record in this case in which a multicolor composite image is printed on a curved surface of a confectionery piece such as an M&M’s® brand peanut or chocolate candy. Consequently, the claimed method is believed to be allowable.

CONCLUSION

For at least the foregoing reasons, applicants submit that the claims are allowable over the art of record and respectfully request that the application be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should be directed to our address given below.

Respectfully submitted,


Brendan Mee
Brendan Mee
Attorney for Applicants

Registration No. 43,391

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200

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